

THE NEUROMOTOR LINK

CONSTIPATION IN CHILDREN WITH NEUROMOTOR DISABILITIES

Each person is unique and therefore must be treated individually. The suggestions here are general guidelines only. As with any health issue, you should discuss the matter with your primary health care provider and do what is best for your child and family.

Constipation is an inability to pass a stool or have a bowel movement as often or as easily as one would like. It usually involves the difficult passage of dry, hard, and/or painful stools, no matter how often. Constipation is very common in all children, and is especially common in children who have neurological differences like cerebral palsy.

SIGNS AND SYMPTOMS

- Infrequent and incomplete bowel movements
- Hard, ball shaped stools (may be very large or like “rabbit pellets”)
- Pain and sometimes bleeding when having a bowel movement
- Abdominal pain or distention
- Diarrhea, “leaking”, or “skid marks” in underwear
- Irritability or other unexplained change in behavior
- Poor appetite
- Gastroesophageal reflux

NORMAL BOWEL FUNCTION

Food and fluids are mixed with acids in your child’s stomach so that it all becomes a liquid. This liquid passes from the stomach to the small intestine where the nutrients from the food and fluids are absorbed or taken into body. Whatever is not absorbed into the body stays in the intestine and moves to the colon (also known as the large intestine). The colon removes water from the waste to form stool. The longer the waste remains in the colon, the more water is removed and the harder the stool becomes. Regular emptying of the colon with daily or every other day bowel movements helps to keep the stools softer and easier to pass.

The longer the waste remains in the colon ...the harder the stool becomes.

After eating and after one just wakes up, the muscles in the intestine move the stool from the colon to the rectum. This movement is known as the “gastrocolic reflex”. There are special parts of the bowel that are controlled neurologically and control when one will have a bowel movement. Exercise and being in an upright position help to move stool through the intestine.

A gastrocolic reflex, being upright and exercise help to move stool through the colon.

When stooling, a squatting position straightens the anal canal. A Valsalva maneuver, which increases abdominal pressure and is done by holding one’s breath and pushing, allows the stool to pass out of the body. The body is even smart enough to be able to tell if it is solid, liquid, and/or gas which needs to come out.

ATYPICAL BOWEL FUNCTION

Children with atypical skeletal muscle tone and poor coordination of the muscles around their anus, such as children with cerebral palsy, may have a hard time having bowel movements. Stool may stay in the colon longer in children with neurological problems

The muscles in the intestine in children with CP have abnormal tone, too.

because their abnormal tone does not let the bowel work right. The longer time in the colon lets the stool become too hard as more water is taken out.

Children with a spinal cord injury or spina bifida may have abnormal coordination or function of their bowel. They can have abnormal motor and sensory function of the colon and rectum so that they do not feel the presence of the stool and the stool does not move normally along the intestinal tract.

Not being able to get into a squatting position may make it harder to push the stool out of the rectum. Poor sitting position makes it hard for the intestine to work right because it is too crowded. Not being in an upright position throughout the day and not moving around enough may also make it harder to have a bowel movement.

Some children know that they have to have a bowel movement, but for whatever reason decide that they do not want to. If this behavior occurs again and again over long periods of time, then stool will build up and can cause the colon to become too big. Prolonged periods of constipation can lead to impaction (a blockage of the colon by large amounts of stool) that also can stretch the colon, known as mega colon. The muscles in a mega colon do not work right, which make it hard to pass a bowel movement. Children with mega colons do not feel the need to have a bowel movement as well as children who have normal colons. Impaction can lead to a problem called “overflow diarrhea”. This is when liquid stool leaks around the blockage, and it appears as though the child has diarrhea. In addition, having a lot of stool in one’s colon can press on the bladder, making bladder control more difficult.

A mega colon is when the colon gets too stretched out and does not work right.

DIETARY AND OTHER CAUSES OF CONSTIPATION

Fluids are the most important part of keeping stools soft. The more clear fluid that enters the intestine, the softer the stool will be when having a bowel movement. Children with feeding and swallowing difficulties, illness, or lack of energy may get too little fluid. Also children who have too much fluid lost through sweating or drooling have a harder time getting the amount of fluid they need. Excessive amounts of milk, cheese and bananas can be constipating and should be avoided.

Adequate amounts of fluid and fiber are very important to keep stool soft.

Fiber is also important for keeping stool soft. It provides bulk, making one feel the urge to stool more often, which in turn keeps the stool softer. Fiber increases intestinal movement, which also helps to move the waste through the intestine. Fiber also helps hold water in, not allowing as much to be absorbed from the stool which in turn makes the stool softer. However, fiber is safe and effective ONLY when it is consumed with increased fluid intake. Again for children with feeding and swallowing difficulties, it may take some creativity to get enough fiber in their diet. Certain medications can contribute to constipation. There are also some medical conditions that may be associated with constipation.

METHODS TO RELIEVE CONSTIPATION

For children with longstanding constipation, impaction, and mega colon, their intestines need to be cleaned out before any other treatments will work right. A bowel clean out can be done “from below” with enemas or suppositories or “from above” with large doses of laxatives. While your child’s bowels are being cleaned out, usually some dietary and behavioral changes are being put into place, too. Be patient! It took months for your child’s bowels to become full of stool. It may take months to get your child into a good stooling pattern. It will take a long time to get the intestine back to its normal size and to get it working the way it should again.

It may take months to get into a good stooling pattern after having a mega colon.

DIETARY: FLUID AND FIBER

The most important dietary change one can do to help stools become softer is to increase the amount of fluid taken in daily. In general, one should drink one and one-half ounces of fluid per pound of body weight per day up to about 8 cups a day.

Child's Weight (in Pounds)	Recommended Fluid Intake Total Fluid Needed in 24 Hours (Cups)
10	2
15	3
20	4
25	4.5
30	5
35	6
40 and up	6-8

Fiber is the another important part of the diet that can be helpful for children with constipation when eaten on a regular basis. It is very important to drink lots of fluid when eating fiber. Some children have problems with gas, cramping or bloating when first starting on increased fiber. To prevent this from happening, increase fiber slowly. For children over the age of two years, the American Health Foundation recommends a fiber intake of “age plus five grams of fiber” (minimum) to “age plus ten grams” (maximum). For instance, a five year old child should take between ten (5 years + 5 grams) and fifteen (5 years + 10) grams of fiber per day.

It is very important to drink lots of fluid when eating high fiber foods.

Fiber can be found in whole-grain breads and cereals, fruits, vegetables, beans, and peas. Seeds and nuts also have a lot of fiber, but may not be good choices for children with feeding and swallowing difficulties. The “P” fruits and juices, such as prunes, pears, plums, and peaches can be particularly helpful. There are commercially available products to help provide fiber to the diet. Some products that are useful for children with neuromotor disabilities include Fruit-eze and Juice Plus Fiber. For children who have difficulty chewing and/or swallowing, dietary changes may be hard to achieve. A nutritionist may be available to help find solutions that will work for your child. See our handout entitled “Recipes to Increase Fiber” for recipe suggestions.

BEHAVIORAL

Increasing physical activity, improving sitting posture, and/or getting a child into the standing position more often can help many children who have constipation. Massaging your child's tummy may help them feel more comfortable and may help them to have regular bowel movements. Two good resources for massage techniques are “Pediatric Massage for the Child with Special Needs” by Kathy Fleming Drehobl, B.S., OTR, and Mary Gengler Fuhr, B.S., OTR/L (1991; Tuscon, AZ: Therapy Skill Builders); and “Infant Massage – A Handbook for Loving Parents”, by Vimala Schneider McClure (1989; New York: Bantam Books).

For children who are able to sit on the toilet, putting them on the toilet at regular times every day can help them get used to having a bowel movement at those times. The best times are usually after meals as the gastrocolic reflex can help with having a bowel movement. If at all possible, the best position for having a bowel movement is to be upright. Being upright increases the pressure in the abdomen and allows gravity to help. For children who have difficulty with balance or trunk control, the use of a specially

Sitting on the toilet at regular times may help establish a good stooling pattern.

adapted toilet chair may be helpful. Also having your child's feet be supported by a stool or on the floor will help him/her with proper positioning and thereby make pushing the stool out easier. For more information on toilet teaching children with neuromotor disabilities, see our handout with that name.

MEDICATIONS

Medication use varies greatly from child to child and practitioner to practitioner. Options usually include laxatives, stool softeners and suppositories. Medications are best used as part of a bigger plan, which would include dietary, behavioral, and medication components. Check with your primary health care provider as to the best plan for your child. For more information about medications, see our handout about medications for constipation.

This publication was developed by the Special Medical Services Section for the Neuromotor Program. For more information on constipation or other issues, contact your coordinator:

State of New Hampshire
Department of Health and Human Services
Office of Medicaid Business and Policy
Special Medical Services Section
29 Hazen Drive
Concord, NH 03301

Toll-free in NH: 1-800-852-3345 ext. 4488 or 603-271-4488